943,651

PATENT SPECIFICATION

DRAWINGS ATTACHED

943,651

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COMPLETE SPECIFICATION

Sostenuto Pedal Attachments for Pianoforte Actions

I, EMILE BROOKS, a British subject of 22, Kendal Street, London, W.2, do hereby declare the invention, for which I pray that a Patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention concerns piano actions of mechanisms of the kind comprising a sustenuto or third pedal which, when depressed, actuates a damper check rail to retain temporarily the dampers of actuated keys, whilst the latter are held depressed, out of engagement with associated strings so that a played chord, or a single note is sustained.

The object of the invention is to provide a simple and inexpensive arrangement which offers a minimum and negligible resistance to the playing of the notes so that the sensitive touch of a player is not impaired.

According to the present invention there is provided a piano action or mechanism of the kind referred to wherein the stem of each damper is fitted with a leaf spring or a blade of springy material which is formed with a slotted portion through which passes the stem wire carrying the damper, the said slotted portion being formed with a part adapted to be engaged by the damper check rail when the sustenuto pedal is actuated to hold the damper out of contact with its strings, the arrangement being such that when the check rail co-acts with the slotted portion of one or more of the leaf springs of certain dampers, the slotted portions of the springs of the other dampers will permit the stem wires of these latter dampers to move free from contact with the edges of the slots.

To enable the invention to be clearly understood, a preferred embodiment thereof will now be described by way of example, with reference to the accompanying drawings, wherein:—

Figure 1 is a side elevation showing the actuating mechanism of a hammer in light outline and the means provided by the invention in heavy outline, and

Figure 2 is a perspective view showing one damper held clear of its string and two dampers functioning normally.

Referring to the drawings, the mechanism for actuating each hammer 1 is indicated generally in light outline by the reference numeral 2 and as this mechanism is a well known conventional form of mechanism it will not be described in detail.

The means provided by the present invention, and which is indicated in heavier outline, comprises a thin strip 3 of springy metal which is secured to the stem 4 of a damper 5. This strip extends above the upper end 4*a* of the stem 4 and merges into a laterally directed cranked portion 6 which inclines slightly upwardly and away from the upper end of the vertical part of the strip 3. This cranked portion 6 is formed with a slot 7 through which freely passes, both lengthways and sideways, the stem wire 8 which connects the damper 5 with its stem 4 and the free end of this cranked portion is formed with an upturned lip or flange 9 adapted to be engaged by the vertical limb 10 of an angle section damper check rail 11 when an associated key 1*a* is depressed and the sustenuto or third pedal is depressed to lower the damper check rail 11 about a pivot 11*a* so that the limb 10 of the latter engages behind the lip or flange 9 of the or each of the springs 3 of the dampers 5 associated with the keys played so that the chord played by these keys will be sustained.

Any suitable connection may be provided between the damper check rail 11 and the sustenuto or third pedal (not shown) and such a connection is shown in the drawings as comprising a fulcrummed link 12 adapted to be swung about its fulcrum 13 when said pedal is actuated, the said link 12 making a pin and slot connection 14 with the lower end of a rod 15 which is displaced vertically when

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the link 12 is swung to lower the damper check rail 11 so that it will engage the lips 9 of the springs 3 of the stems 4 associated with the dampers 5 of actuated hammers 1. When the sostenuto pedal is released, the damper check rail 11 rises and allows the dampers 5 to move back into contact with the strings 16.

The slots 7 permit the damper stem wires 8, and therefore the dampers 5, to move normally when the springs of these dampers are not engaged by the check rail 11.

When a pianist strikes a chord of several notes and whilst these notes are still depressed, he lowers the sostenuto pedal with his foot, which brings down the rail 11 and traps those springs 3 which now have their flanges 9 in contact with the inside face of the limb 10 of the rail. He then plays other notes, and the other sides of the flanges 9 of the springs of the dampers of these other notes come in contact with the front edge of the rail 11 allowing the stems 8 of these dampers to pass freely backwards and forwards through the slots 7 in the springs, the slots providing ample clearance for this purpose.

The blade springs 3 will permit the replaying of a chord or note while they are still engaged by the check rail 11 and offer little or no resistance to the movement of associated keys so that the sensitive touch of a player remains unimpaired.

WHAT I CLAIM IS:—

1. A piano action or mechanism of the kind referred to wherein the stem of each damper is fitted with a leaf spring or a blade of springy material which is formed with a slotted portion through which passes the stem wire carrying the damper, the said slotted portion being formed with a part adapted to be engaged by the damper check rail when the sostenuto pedal is actuated to hold the damper out of contact with its strings, the arrangement being such that when the check rail coacts with the slotted portion of one or more of the leaf springs of certain dampers, the slotted portions of the springs of the other dampers will permit the stem wires of these latter dampers to move free from contact with the edges of the slots.

2. A piano action or mechanism according to Claim 1, wherein each leaf spring or springy blade comprises a part which is secured to a damper stem and projects above the end of the latter and is formed at its upper end with a cranked portion formed with a slot in which the damper stem wire can move during normal functioning of the damper, the outer end of said cranked portion being formed with an upturned lip or flange which can be engaged by the damper check rail when the latter is actuated by the sostenuto or third pedal.

3. A piano action or mechanism of this kind referred to constructed and arranged to function substantially as hereinbefore described with reference to and as illustrated by the accompanying drawings.

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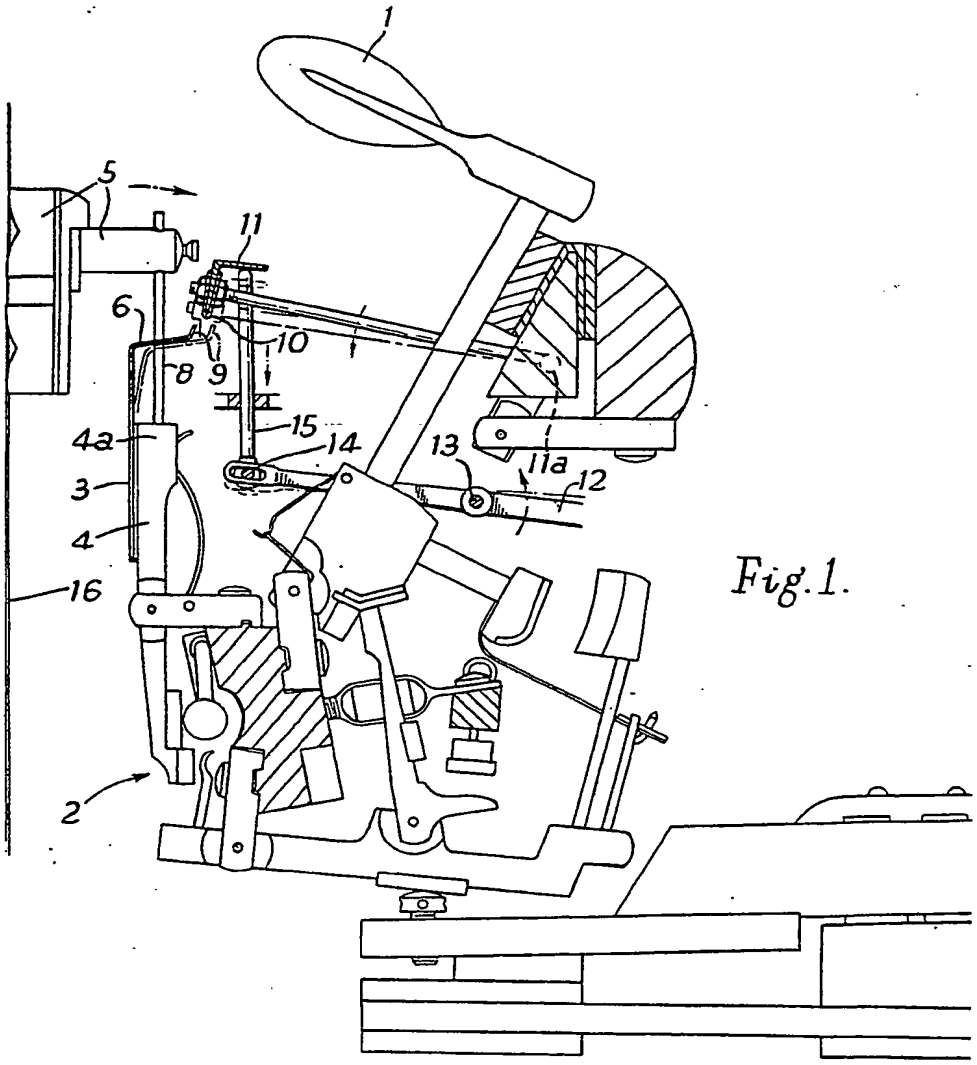

Fig.1.

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1 SHEET *This drawing is a reproduction of the Original on a reduced scale.*

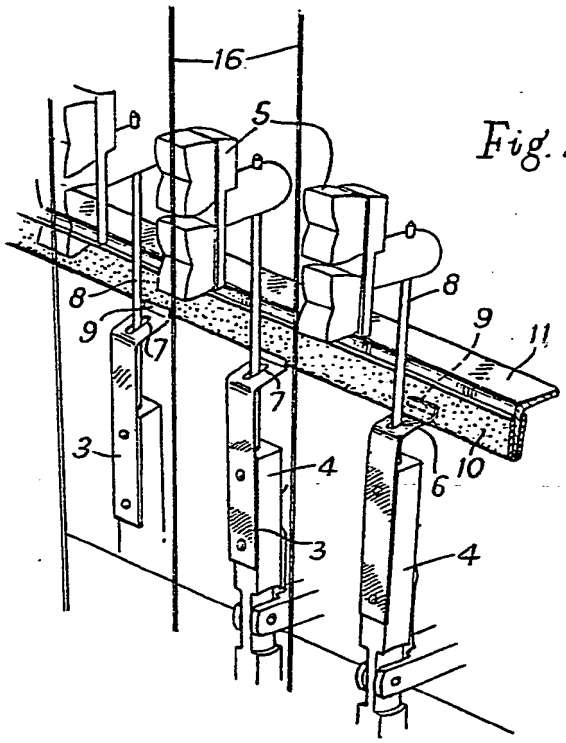
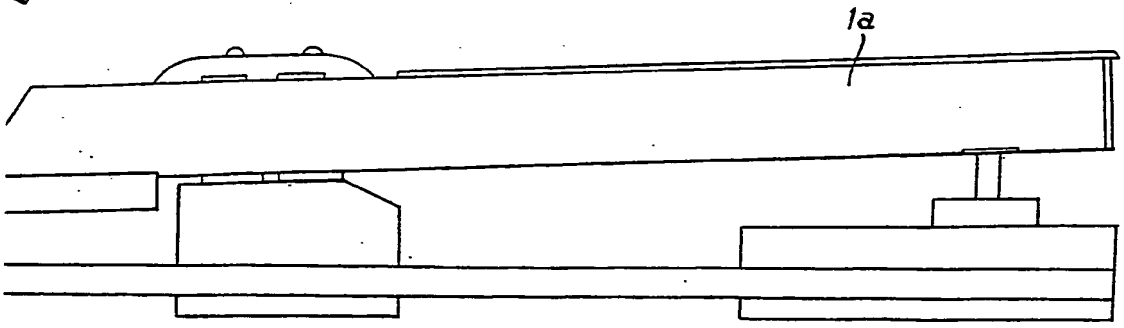


Fig. 2.

Fig. 1.



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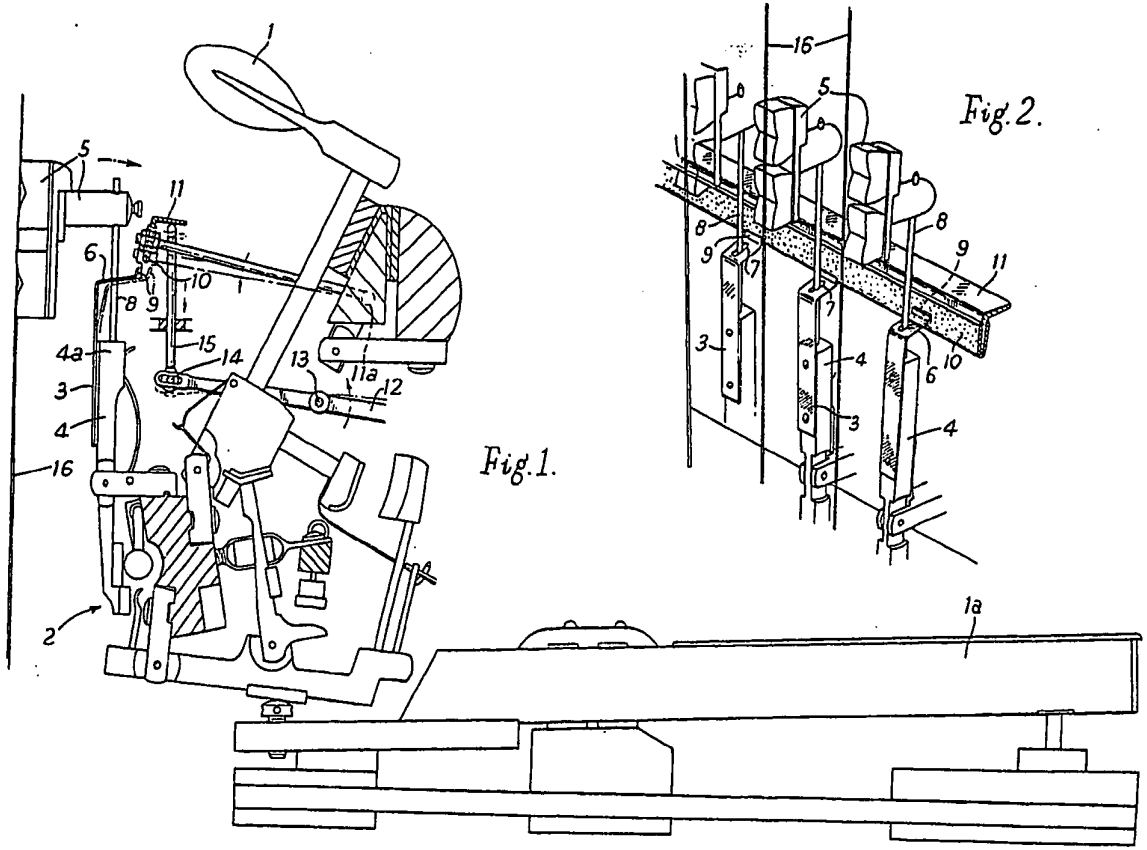

Fig.1.

Fig.2.